
Island of Meroe (Sudan) No 1336

Official name as proposed by the State Party

The Archaeological Sites of the Island of Meroe

Location

River Nile State, Shendi Province
Republic of Sudan

Brief description

The Island of Meroe, a semi-desert landscape between the Nile and Atbara Rivers, was the heartland of the Kingdom of Kush, a major power in the ancient world from the 8th century BCE to the 4th century CE, before the onset of Christianity in the region. The property consists of the royal city of the Kushite kings from the 3rd century BCE at Meroe, near the River Nile, and the nearby religious sites of Naqa and Musawwarat es-Sufra. There are remains of places, steep-sided stone or fired brick pyramidal funerary monuments, and elaborate temples, many of which reflect Egyptian, Roman and Sahelian African influences. The three sites testify to the wealth and power of the Kushite state and to its wide-ranging trade contacts with the Mediterranean and Middle Eastern worlds.

Category of property

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a serial nomination of three *sites*.

1 Basic data

Included in the Tentative List

31 August 2004

International Assistance from the World Heritage Fund for preparing the Nomination

2004

Date received by the World Heritage Centre

25 January 2010

Background

This is a new nomination.

Consultations

ICOMOS has consulted its International Scientific Committee on Archaeological Heritage Management and several independent experts.

Literature consulted (selection)

Edwards, D.N. *The archaeology of the Meroitic state: new perspectives on its social and political organisation*, Tempus Reparatum, Oxford, 1996.

O'Connor, D., *Ancient Nubia, Egypt's Rival in Africa*, The University Museum of Archaeology and Anthropology, University of Pennsylvania, Philadelphia, 1993.

Wildung, D. (ed.), *Sudan: Ancient Kingdoms of the Nile*, Institut du monde arabe, Flammarion, Paris-New York, 1997.

Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 23 to 30 September 2010.

Additional information requested and received from the State Party

The State Party was requested on 23 September 2010 to provide maps with annotated features for each site, together with clarification of funding arrangements for the proposed management framework for the overall property.

A response was received on 21 October 2010 including maps. This information has been incorporated into the relevant sections of the evaluation below.

Date of ICOMOS approval of this report

10 March 2011

2 The property

Description

The nominated property comprises a total of 2,357.36ha in three separate sites:

Meroe is in two parts: Meroe 1 (town site) west of the highway covers 612.551ha and Meroe 2 (cemetery site) east of the highway covers 674.904ha. Meroe 1 & 2 are surrounded by a buffer zone of 1,718.031ha.

Musawwarat es-Sufra covers 836.57ha and is surrounded by a buffer zone of 2,653.64ha.

Naqa covers 231.852ha and is surrounded by a buffer zone of 9,509.92ha.

The Kingdom of Kush emerged as a powerful African civilisation in the Middle Nile Region around the 9th century BCE at Napata around Gebel Barkal, about 50km downstream from the fourth cataract of the Nile. The Napatan rulers were the inheritors of the Pharaonic kingdom.

They occupied Egypt for nearly a century, at that time ruling over a vast empire extending from the Mediterranean to the heart of Africa. The seat of power rested with the king who journeyed annually throughout his realm. The early rulers were buried at el-Kurru, a few kilometres downstream from Gebel Barkal, then at Nuri and at other nearby sites. These were inscribed on the

World Heritage List in 2003 as Gebel Barkal and the Sites of the Napatan region.

The Kushite kingdom moved its capital and royal burials south to Meroe in 4th century BC. At Meroe and at nearby sites, the Kushites developed a civilisation that was mostly sub-Saharan in character, while maintaining strong links to the Mediterranean world to the north. They created urban centres on the banks of the Nile, the most important being the capital Meroe and the port of Wad ben Naqa (not part of the nominated property). Adequate annual rainfall and alluvial deposits also encouraged the spread of settlement away from the Nile Valley, the largest being Naqa and Musawwarat es-Sufra which were both religious centres. Numerous small religious centres also dot the Western Butana and Keraba. These comprised a temple and a reservoir (*hafir*), forming permanent foci for semi-nomadic pastoralists and providing a means through which the government exerted its power and control over the population. None of these smaller sites are nominated.

Meroe was at the convergence of a network of trade routes along the White and Blue Niles connecting the Red Sea port towns in the East to beyond Lake Chad in the West. They manufactured and traded richly decorated cotton textiles, ceramics, iron and objects of bronze, and gold and other luxury items which were much in demand in Roman Egypt.

The main structures to survive substantially above ground are elaborate temples and distinctive pyramidal funerary monuments, built of durable stone, or red fired brick as well as numerous *hafirs* (reservoirs).

Most Meroitic temples had 'pylons' (monumental gateways) and enclosure walls, but the number of rooms varied from one to three or more. The temples were built in a variety of styles and, over time, became more influenced by Hellenistic and Roman architecture. They were elaborately decorated with a variety of royal and military themes. The temples are usually associated with *hafirs* and would have acted as a resting place for travellers and nomads as well as being centres of regional authority.

The cemeteries are characterised by tall pyramids, echoes of those built in Egypt around Aswan in the New Kingdom at least 800 years earlier but rather steeper. Built either of stone or of burnt brick they would originally have been plastered with lime mortar and then painted and so the differences in materials would not have been apparent. The burials were in tombs cut into the sub-surface rock beneath Meroe.

The site of the royal city of Meroe, known today as Begraweya, is near the banks of the river Nile about 220 north of Khartoum. It lies in the savannah belt on the south side of the Sahara, receiving today an annual rainfall of 100mm. Proximity to the Nile made the region viable throughout the city's history. The site is partly overlaid by the villages of Deraqab and Kigiek.

The site consists of the remains of the Royal city within an enclosure wall and to the east extensive Royal cemeteries, a number of temples, a reservoir (*hafir*), cemeteries of the less wealthy inhabitants of the city and a kilometre to the east the Sun temple and its associated *hafir*.

The Atbara to Khartoum railway cuts through the eastern edge of the settlement. The main highway connecting Khartoum with Port Sudan runs north-south through the centre of the plain.

The irregular trapezoidal stone-walled area known as the Royal City has four gates and includes the 'Royal Baths' and four temples. Some blocks in the wall bear masons' marks in Greek and the date suggested is second half of 3rd century BCE to mid 2nd century CE.

The bath structure was a water sanctuary decorated with faience plaques bearing alternate figures of lions and bulls in stone, two painted serpents and an elephant, and three free-standing statues; the central one a harpist and the one on the left a musician playing the pipes. It was supplied by a brick vaulted, cement-lined aqueduct. Filling the basin depended on the water level of the Nile; it was only operative at the high Nile and was associated with inundation, the New Year and by extension, the cult of the ruler.

The area also includes remains of a small rectangular temple possibly dedicated to Amun, with interior plastered walls painted with scenes of enthroned gods with goddesses standing behind, and images of bound prisoners.

Outside the walled enclosure adjacent to its eastern wall is the Temple of Amun, the largest structure on the site constructed of mud and red brick with door jambs, columns, pylons and with the main sanctuary of Nubian sandstone. The formal approach was lined over time with small temples, and close to the pylon, by two stone rams either side. The temple includes an outer courtyard, a hypostyle hall, several ancillary rooms and the sanctuary. The fact that this temple faces towards the desert, which is unusual as Amun temples usually face the river, together with evidence of thick deposits of Nile silt in excavations immediately east of the temple, suggest that when the temple was built, the main river channel ran to the east of the city, which stood on an island. The Nile is a dynamic river and is constantly shifting its course, creating new islands and sometimes washing others away.

The Lion Temple, dedicated to the cult of Apedemak (Lion God) is located on a heap of iron slag immediately east of the town site. It is a double-chambered sandstone temple decorated with reliefs. The entrance is by a flight of steps originally flanked by two lion statues.

The Sun Temple located around one km from the town is set on a podium with a colonnade around the temple's

sanctuary, a Greek architectural feature. It was built around 600 BC and restored in the 1st century.

Relief decoration depicts bound captives, war scenes, massacre scenes and an image of a ritual temple. Immediately in front of the temple a large portrait head of Augustus was buried. This may be loot from the Kushite raid on Aswan around the late 1st century AD at a time following the Roman occupation of Egypt. Renewed contact with the Graeco-Roman world is evident in the architecture of this period under the co-rulers King Natakamani and Queen Amanitore, including the kiosk in the forecourt of the Amun Temple.

There are three royal cemeteries to the east of the city – known as the western, northern and southern cemeteries.

Many of the graves are surmounted by steep stone or brick pyramids, a dramatic feature of the site, particularly along the eastern side. They were robbed out in antiquity, and many have their tops removed as a result of later treasure hunting by the 19th century explorer Ferlini in the 1830s.

The Western Cemetery, thought to be the burial ground for the princes and nobles of Meroe, contains more than 500 graves.

The Southern Cemetery contains more than 200 graves of two types; one type containing a non-mummified body on a wooden bed, the other containing a mummified body in a wooden coffin adorned with a bead net as in Egyptian third intermediate period burials. The earliest burials are dated to around 747 BCE. When the burial of rulers began at Meroe in the 3rd century BCE they were initially interred in the Southern Cemetery and the graves crowned with pyramids.

The Northern Cemetery is exclusively for the rulers of Meroe and contains 44 pyramids; all but six mark the tombs of reigning monarchs. The earlier pyramids are constructed of stone facing blocks on a rubble core, the latest were faced in red brick or were built of coursed rubble. They incorporate a funeral chapel on the east side, usually built of dressed sandstone bearing reliefs and inscriptions in Egyptian and Meroitic.

There are sandstone quarries in the hills near the Northern and Southern cemeteries, a possible ritual site on the upper slopes of Gebel Ardeb, and extensive heaps of iron slag immediately east of the town indicating iron making and working, carbon-dated to c514 BCE – c210 BCE.

Musawwarat es-Sufra

The site of Musawwarat es-Sufra, the Kushite Aborepe lies around 40km south of Meroe, 35km east of the Nile at the head of the Wadi el-Banat in the Keraba region. With Naqa, it was serviced by the port of Wad ben Naqa, on the east bank of the Nile, where there are the

remains of an enormous palace, together with two temples and a town.

The ruins of Musawwarat es-Sufra are located in a large basin surrounded by low sandstone hills.

The main features of the site include the 'Great Enclosure', the 'Small Enclosure', the Lion Temple, the Great Reservoir (*Hafir*), a smaller reservoir, quarries, minor temples and other structures. An additional reservoir lies further away up the wadi.

The large temple complex, known as the "Great Enclosure" may have been a pilgrimage centre or a royal palace.

It covers an area of 55,000sq m. Constructed in sandstone, it comprises individual buildings, store rooms, workshops, kitchens, walled enclosures, and ramps. It exhibits eight major phases of rebuilding dating from the Napatan period onwards. There are also remains of a building which may have been a temple or possibly the royal throne room (Temple 100), adorned with reliefs; a pottery workshop and a garden irrigated from the Great Reservoir. Most of the walls of the complex bear graffiti both pictorial and in Meroitic script, including many representations of elephants, and masons' marks in both Meroitic and Greek.

The Small Enclosure lies a short distance away and covers an area of around 1,883sq m. Built in sandstone and red brick, it comprises a courtyard surrounded by 34 rooms. It has been identified as the seasonal residence of the king of Kush.

The Lion Temple dating from the 3rd century BCE is located to the east across the wadi from the Great Enclosure. Built in sandstone it is a single chambered temple with six columns. Inscriptions are in Egyptian hieroglyphs including reference to Apedemak as "*lord of Napa and the lord of Musawwarat*". The lower parts of the columns bear reliefs of griffins and lions, and other parts of the temple depict lions and elephants in relation to a representation of the king before Apedemak and his consort. The temple had collapsed outwards in antiquity; when excavated in the 1960s it was found possible to re-erect the blocks accurately from where they had fallen and a new roof was constructed for the temple.

The Great Reservoir (*Hafir*) is 250m in diameter and excavated 6.3m into the ground.

Recent excavations have led to the discovery of a pottery workshop for the manufacture of fine Meroitic ware and the remains of an extensive garden complex in one of the eastern courtyards, possibly irrigated through pipes from water tanks supplied from the Great *Hafir*, located several hundred metres to the east, via an aqueduct.

Naqa

The third site, Naqa, the Kushite Tolkte lies around 15km south of Musawwarat es-Sufra and 35km east of the Nile and covers an area about 1km long by 600m wide.

The main features of the site include the Lion Temple, the Kiosk, the Amun temple, the small temple, the temple of King Amanahakharem, a circular structure, a large reservoir (*hafir*) on the southern side of the site, quarries to the east of the site and a vast cemetery of large stone tumuli on the northern side of the site which has not yet been excavated.

The greater part of the settlement remains unexcavated. Naqa also contains a 60m deep well dug during the Anglo-Egyptian Condominium in 1904. This is frequented by large numbers of nomads with their camels, sheep and goats.

The Lion Temple (Building 300) lies on the western side of the site; a single-chambered temple built in sandstone blocks, it is preserved to almost its original roof height and dated to the 1st century CE. The reliefs indicate that one side of the temple was associated with Apedemak and the other with Amun.

The Kiosk (Building 361) is a small rectangular sandstone structure preserved almost to its roof level, standing a few metres to the east of the Lion Temple. Architectural and decorative elements show Pharaonic Egyptian, Hellenistic and local artistic influences and the building is thought to be a shrine to the goddess Hathor.

The Amun Temple (Building 100) stands to the east of the Kiosk. It is built of sandstone, red brick and mud brick. It is approached from the west by a long ramp lined each side with six ram figures interrupted in the centre by a sandstone kiosk. Two columned halls precede the triple sanctuary. A thirteenth ram at the rear wall of the sanctuary may mark the beginning of an avenue leading to the mountain or to another temple. The preserved Meroitic hieroglyphic scene legends distinguish four Amun gods. The sanctuary chamber is built of stone and floored with stone slabs. On both sides reliefs depict a procession of Nile gods behind the king and queen towards the back of the chamber where two representations of Amun are seated. The temple was apparently destroyed by an earthquake.

The small temple of Queen Shanakdakhete (Temple F) is located close to the base of Gebel Naqa. It was dedicated to the ram-headed Nubian Amun. The earliest known inscription in Meroitic, the indigenous language of the Kushites, runs around the niche in the centre of the back wall of the temple.

History and development

From the 4th century BCE onwards, Kushite royal activity was concentrated to some extent in the Island of Meroe, the fertile region bounded by the Nile, the Blue Nile and the River Atbara. Meroe became the site of royal burials from the 3rd century BCE. Previously the rulers had been

buried at el-Kurru, a few kilometres downstream from Gebel Barkal, then at Nuri and at other nearby sites. Scholars have suggested that the reason the centre of royal activity moved south may have been an invasion of Napata by the XXVIth Dynasty Egyptian pharaoh Psammetik II at the beginning of the 6th century BCE.

The Kingdom of Kush collapsed, possibly due to invasion by the Axumites and foreign tribes towards the middle of the 4th century CE. The country was converted to Christianity in the 6th century and three Christian kingdoms were established in the Middle Nile Region. Burials in the Western Cemetery at Meroe date to the 6th century, but contemporary occupation within the Royal City has not been noted and the site appears to have been abandoned from that period until it was rediscovered by James Bruce during his travels through the area in 1772. Burckhardt noticed the ruins in 1814 and they were subsequently described by French scholars Frédéric Cailliaud and Linant de Bellefonds in 1821 and the British traveller George Hoskins in 1833. In 1834 the Italian adventurer Giuseppe Ferlini decapitated a number of pyramids in his unsuccessful search for ancient treasures. The Royal Prussian Expedition led by Carl Richard Lepsius undertook the first scholarly investigation in 1842-4. John Garstang's excavations 1910-14 confirmed Bruce's identification of the site as Meroe. He uncovered large areas of the settlement and parts of the Western Cemetery. His work was followed by that of George Reisner who excavated three pyramid fields less than ten years later. Musawwarat es-Sufra and Naqa were similarly discovered and visited by early travellers and scholars. Work since the early 20th century at the individual sites is detailed below:

Meroe

The site of the Royal City became overgrown with acacia trees in the decades following the first periods of excavation in the early 20th century. The antiquities area was fenced and left until the 1960s when large sections were excavated by the universities of Calgary and Khartoum, and again in 1992-93 by the Humboldt University, Berlin. A shelter building was erected over the excavated remains of the Royal Baths at the beginning of the 20th century and renewed some decades later but is causing problems to wall paintings due to inadequate roof drainage and poor ventilation.

Windblown sand is causing ongoing erosion to the pyramids with their funerary chapels, and has increased in recent decades. From 1975 a number of buildings were dismantled and rebuilt under the direction of Dr. Hinkel. Up to 1999, fourteen chapels had been restored and roofed using the original blocks or prefabricated replacements.

Musawwarat es-Sufra

First mentioned by Linant de Bellefonds in 1822, the site was subsequently visited by Frédéric Cailliaud a few months later. The first scholarly description was by Lepsius and the first archaeological excavations were undertaken by the Butana Expedition of Humboldt

University Berlin in the late 1950s and 1960s directed by the late Professor Hintz, and later in the 1990s and early 2000s. Humboldt University is still active in its research and protection program at the site.

However damage has occurred to all structures due to windblown sand erosion, rainwater runoff, the activities of sheep and goats and uncontrolled access by tourists.

The Great Hafir has been partly dug out in an attempt to restore its original function as a reservoir, exposing archaeological deposits in its interior which are now eroding.

Excavated walls of the Great Enclosure have been consolidated using a mixture of sand, earth and lime. Others have been supported by structures of burnt brick. In front of the central temple, columns and bases bearing reliefs have been enclosed in walls of burnt brick for protection from erosion by wind-blown sand.

The Lion Temple was dismantled and re-erected under the direction of Dr. Hinkel; missing wall parts were constructed in burnt brick, plastered and coloured; the sandstone masonry was chemically consolidated and the temple was fenced. Defects in the modern roof have lead to deterioration of the walls and interior reliefs of the temple.

The 1960s excavation of a small temple (IIA) suffered from rain damage and was roofed with a metal construction to protect against rain and grazing goats. To protect against damage from windblown sand, the walls of the protective structure are covered with reeds which are renewed periodically.

The excavated building complex IIIB was enclosed with burnt brick walls and filled with sand to protect against wind erosion and water runoff.

Naqa

Like Musawwarat, the site was visited and described by 19th century travellers and scholars who passed through the region. Lepsius mapped the site topographically. In the early 1980s, scholars from the University of Tübingen (Germany) copied the reliefs and inscriptions of the Lion Temple. Since 1996, the investigation and conservation work on the site has been undertaken by the archaeological mission of the Egyptian Museum of Berlin. The Roman 'Kiosk' is well-preserved and there are substantial remains of the Lion Temple, Temple of Amun and Temple F. The rams flanking the processional way to the Lion Temple have been re-erected on their bases. The painted stone altar has been cleaned, consolidated and buried in sand for protection, as have decorated blocks from Temple 200.

3 Outstanding Universal Value, integrity and authenticity

Comparative analysis

The State Party makes comparison with the Egyptian World Heritage property containing Pharaonic pyramids (Memphis and its Necropolis – the Pyramid Fields from Giza to Dahshur, 1979, criteria (i), (iii) and (vi)) and argues that nowhere else in the world are there royal cemeteries in which all the many tombs are in pyramidal form. The State Party argues also that the Meroitic pyramids are much smaller and more steep-sided, and should be seen as a sub-set of the overall pyramid form.

ICOMOS notes that comparison could also be made with other World Heritage properties containing funerary monuments and temples in the region such as the Nubian Monuments from Abu Simbel to Philae (1979, criteria (i), (iii) and (vi)), which are however examples of a different category of monumental architecture, being so much grander in scale; and the Pharaonic temples in Upper Egypt from the Ptolemaic and Roman periods on the Tentative List for Egypt, which do not however, combine the eclectic influences visible in the temples at the Meroe sites.

The State Party also compares the property with the Gebel Barkal and the Sites of the Napatan Region (2003, criteria (i), (ii), (iii), (iv) and (vi)) World Heritage listed sites and argues that the Meroe sites are complementary to that property, representing the later and fully developed Kushite Kingdom. This is supported by the evidence of more developed structures reflecting Hellenistic influences as well as Egyptian and African in the architecture, decoration and iconography, and representing an extensive network of social, religious and commercial contacts.

ICOMOS considers that what is not justified in the comparative analysis is the selection of sites. Meroe, Musawwarat es-Sufra and Naqa are the three main centres of the later Kushite kingdom. However as the wealth of the settlements was based on trade, links with the river and its traffic were essential. The port for both Musawwarat es-Sufra and Naqa was Wad ben Naqa directly on the river Nile. This has not been included and there is no description of it or justification for its absence. The port's remains cover an extensive area and include a large palace, and temples, some of which have been recently excavated. One is in the form of a perfect circle and originally would have been beehive shaped. A second temple has provided evidence to show that it could have been associated with the Lion god.

If the nominated property is to reflect fully the wealth and influence of the kingdom and the way it functioned, then consideration should be given to including this port.

An extended comparative analysis is needed to show how the three nominated sites relate to other sites in the area including the port of Wad ben Naqa.

ICOMOS considers that the three sites together demonstrate the development of the Kushite civilisation at the height of its power. Further analysis is needed to understand whether they on their own demonstrate fully its extent and its relationship with the Nile.

ICOMOS considers that the comparative analysis justifies consideration of sites reflecting the Kushite kingdom on the World Heritage List, but considers that the comparative analysis should be augmented to relate the three nominated sites to other remaining sites of the Kushite kingdom, particularly Wad ben Naqa, in order to understand whether this needs to be included in the nominated property.

Justification of Outstanding Universal Value

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- The Island of Meroe is the heartland of the Kingdom of Kush, a major power in the ancient world from the 8th century BCE to the 4th century CE. Meroe became the principal residence of the ruler and from the 3rd century BCE onwards it was the site of most subsequent royal burials.
- The nominated sites comprise the best preserved relics of the Kingdom of Kush, including pyramid tombs, palace and domestic buildings, temples with relief decoration and iconography, shrines, water reservoirs, quarries and evidence of ironworking.
- The wide range of architectural forms and environments testify to the wealth and power of the Kushite state and its contacts with the Mediterranean and Middle Eastern worlds.

The State Party states that the serial approach is necessary to cover the wide range of architectural forms and environments that together demonstrate the extent and development of the Kingdom of Kush. Meroe was the capital city located on the Nile. Naqa and Musawwarat es-Sufra represent the spread of settlement away from the Nile.

ICOMOS considers that the three sites do reflect that best standing remains from the Kushite kingdom but that the three together do not fully testify to the way the kingdom was linked by the river Nile to the Mediterranean and Middle Eastern worlds – the artery through which it gained wealth from trade. Further analysis is needed to show whether Wad ben Naqa could contribute to justifying the full extent of the Kingdom.

Integrity and authenticity

Integrity

ICOMOS notes that the sites selected are the remains of what were the capital city of the Kushite kingdom (Meroe) with its religious buildings, reservoirs and associated extensive royal burial ground of pyramid

tombs, and the kingdom's two largest hinterland centres: the religious centre at Musawwarat es-Sufra and the urban centre at Naqa. Together they provide evidence of the size, and influence of the Kushite civilisation at the height of its power. However without the port city of Wad ben Naqa the trade routes that linked the three cities to the Mediterranean and the Middle East cannot be fully understood.

According to the State Party, the integrity of the three sites: the two parts of the Meroe site, Musawwarat es-Sufra and Naqa, conforms with the requirements of the *Operational Guidelines for the Implementation of the World Heritage Convention* because they have not been subject to inappropriate interventions of any significance since their abandonment and their places in the natural landscape have not been compromised or degraded.

ICOMOS considers that for Meroe, while nearly all key attributes that reflect outstanding universal value are included within the property boundary, a small unexcavated part of the Royal City beneath the now abandoned settlement of Deraqab should be included also, because it has future research potential to contribute to the understanding of the property.

Many features of the component sites have deteriorated over the course of time, pyramids have collapsed and a number were partly demolished by the treasure-seeking activities of Ferlini in 1834. Wind erosion as the result of desertification over the past 40 years has gradually erased reliefs, particularly in the Sun Temple and also from pyramids.

The main north-south highway linking Khartoum and Port Sudan, which separates the two parts of the Meroe site is a visual and auditory intrusion and impacts negatively on the integrity of the property, as does the line of high voltage power transmission lines. Two pipelines run north-south along the ground through the property some distance east of the highway; one has cut through the old *hafir*. The railway passes through along the western side of the property, metres from the entrance to the Royal City. Its line was cut through a large slag heap. About two trains pass per day. The tracks have been replaced recently and it is said the line will be doubled in future.

There is some settlement in unobtrusive buildings in the western part of the property, together with guard houses and the University of Khartoum excavation house (Garstang's house). Some government structures, in particular an unfinished guest house located between the Southern and Western Cemeteries, and the unfinished museum to the east of the Northern and Southern Cemeteries have a detrimental impact on visual integrity. The Royal City ticket office is blocking the view along the fundamental west-east axis of the Temple of Amun, which connects the Royal City to the pyramids.

In order to meet the conditions of integrity, there needs to be a definite timetable for the re-routing of the highway, transmission lines and pipelines around the outside of the property to the east; subject to satisfactory impact assessments, the removal of the unfinished guest house, unfinished museum and the ticket office blocking the alignment view at the Amun temple; no new settlement housing should be allowed; and strict controls should be applied to the location, design and materials of excavation houses, guard houses, site museums, visitor centres/facilities, access tracks, waste management, utility services, and signage. Other existing structures need attention to camouflage.

The buffer zone is adequate for the most part but includes only one of the northern hills. The southern flanks of these hills are all in clear view of the property and offer opportunity for visual impact on its integrity as demonstrated by the small lodge built only a few years ago, just inside the buffer zone to the north of the Northern Cemetery.

The buffer zone should be extended to include the south flanks of the northern hills and strict controls should be applied to the location, design and materials of any new structures in the buffer zone. Existing structures need attention to camouflage.

ICOMOS considers that for Musawwarat es-Sufra, the property boundary and buffer zone are adequately drawn. The integrity of the archaeological landscape is impressive. Efforts are being made to prevent damage from wind and human activity. Modern buildings include the newly built rest house close to the Small Enclosure, a small guard hut close to Temple IIA, and a few modest guard houses to the east of the Great Enclosure. The new rest house, which was built with government funds without the knowledge of the Antiquities authority, is now obscured by vegetation, but this lush, green irrigated vegetation stands out in the semi-arid basin.

ICOMOS considers that for Naqa the nominated property encompasses the whole site. There is no habitation in the area other than that of the guards and the excavation house, leaving the archaeological site intact. Wind erosion has not yet had as much impact as seen at Meroe. In addition there are several mounds and numerous tumuli that remain untouched, awaiting possible future excavation. The bright, obtrusive police office at the present entrance to the site, at the edge of the property, impacts on the site's visual integrity and needs attention to camouflage. The well, established under General Gordon, while not an attribute of OUV continues to be used by pastoralists and helps maintain community support for the site.

In considering the integrity of the whole property, this brings into focus whether the three sites can fully reflect the full extent of the Kushite Kingdom and its trade and cultural exchange or whether the port of Wad ben Naqa should be included and further analysis is needed to address this.

Authenticity

The State Party states that the authenticity of the sites is in conformity with the requirements of the *Operational Guidelines*, arguing that while the partial demolition by Ferlini in the 1830s was undeniably very deleterious to a small number of pyramids in the Meroe cemeteries, the overall appearance of the cemeteries has survived. In relation to the restoration that has been carried out since the mid 20th century, the State Party argues that while the materials and techniques employed do not in certain instances conform with current conservation principles and practice, which have made considerable advances since these works were carried out, the precepts of the Venice Charter (1954) and the Nara Document (1995), and the concept of *anastylosis* have not been violated. Two or three small pyramids have been completely rebuilt, with a didactic purpose, in order to demonstrate how they would have appeared in antiquity.

ICOMOS considers that at Meroe, archaeological research activities primarily by foreign scholars since the late 19th century have left extremely large spoil heaps, particularly in the Western Cemetery and the Royal City, which impact on the setting and adversely affect site drainage in some areas. Conservation works to the pyramids and temples have involved more *reconstruction* (in the Burra Charter sense of introducing new material), than *in situ* stabilisation or *restoration* (where new material is not introduced) or true *anastylosis*. However the whole history of archaeological discovery and the developing approach to it can be told at this site – from 18th century European adventurers, travellers and treasure hunting, through the mid-19th century scholarly endeavour of the Royal Prussian Expedition, early 20th century archaeological excavations of John Garstang, mid 20th century excavations by the Universities of Calgary and Khartoum through early approaches to conservation up to the present day. While this aspect of the site is not an attribute of OUV as a Kushite site, it is nevertheless one to take into account in considering authenticity, given that the number of features 'restored' so far is said to be small. The work to the Royal Baths and pyramid temple/porches using brickwork which is difficult to distinguish from the original could be interpreted as part of telling the overall story of the site, and is not an issue so long as it is not repeated.

ICOMOS considers that what is necessary is a review of previous treatment approaches and development of a conservation strategy in line with current best practice.

At Musawwarat es-Sufra, ICOMOS notes that new wall construction around the Lion Temple and the raising of the north wall of the Great Enclosure were apparently undertaken as protective measures. They need to be assessed in relation to their performance in this regard and reviewed in the light of current best practice. Apart from these elements, the Lion Temple has been reconstructed using new material, Temple 100 has been excavated and undergone some *anastylosis* and the *hafir* has been subject to archaeologically unsupervised

re-excavation, in order to restore its original function as a perennial water source for pastoralists' live stock. All of these impact to a degree on authenticity.

Again, what is necessary is a review of previous treatment approaches and development of a conservation strategy in line with current best practice.

At Naqa, ICOMOS considers that the authenticity of this site is high, although the Amun Temple has undergone some reconstruction using new materials. The Lion Temple and the 'Kiosk' have been reassembled by *anastylosis* in the Venice Charter sense rather than by reconstruction using new materials.

In terms of authenticity of the whole property, and its ability to reflect all the necessary attributes of the proposed Outstanding Universal Value, ICOMOS considers that further analysis is needed to understand whether the port of Wad ben Naqa is needed in order to understand better the relationship with the river and trade routes that led to the substantial cultural exchanges that are reflected in the property.

In conclusion, ICOMOS considers that the conditions of integrity have been met for the individual sites but that more analysis is needed to understand how the port might contribute to the integrity of the whole property. The conditions of authenticity have been met for individual sites but with the proviso that future conservation reflects an agreed strategy based on a review of past conservation practices. There is a small boundary adjustment at Meroe and a timetable needs to be set for the diversion of infrastructure and removal of structures at Meroe. For the whole property, whether the authenticity could be strengthened through the addition of the port needs to be established.

Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (ii), (iii), (iv) and (v).

Criterion (ii): exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;

This criterion is justified by the State Party on the grounds that the archaeological sites of the Island of Meroe provide a detailed insight into the exchange of ideas between central Africa and the Mediterranean world along what was the major corridor to and from Africa over a very long period during the ancient world. The interaction of local and foreign influences is demonstrated by the architecture, art, iconography, religion and language.

ICOMOS considers that foreign influences are reflected in the architecture, decoration and iconography and reflect the contact the kingdom had with the Mediterranean world and Arabia as a result of its

extensive trade. In order to fully justify this criterion it would be necessary to understand how there might have been an inter-change of values resulting from the trade and for this it would appear to be desirable to include its port on the Nile. Further analysis is needed to address this issue.

ICOMOS considers that this criterion has not been fully justified at this stage.

Criterion (iii): bear a unique or at least an exceptional testimony to a cultural tradition or to a civilisation which is living or which has disappeared;

This criterion is justified by the State Party on the grounds that all aspects of the Kushite civilisation were largely expunged by the arrival of Christianity on the Middle Nile in the 6th century CE. The nominated sites with their wide range of monument types, well preserved buildings, and potential for future excavation and other avenues of research are unique testimony to this, perhaps the greatest civilisation of sub-Saharan Africa.

ICOMOS considers that the testimony is exceptional rather than unique, given the Gebel Barkal and Napatan sites. ICOMOS considers that the nominated sites with their wide range of monument types, well preserved buildings, and potential for future excavation and other avenues of research contribute to an exceptional testimony to the wealth and power of the former Kushite state and its extensive contacts with the African, Mediterranean and Middle Eastern worlds. However consideration should be given assessing how the port might contribute to the nominated property.

ICOMOS considers that this criterion could be justified but consideration should be given to assessing whether the inclusion of the port would give a more complete picture of the scope and extent of this trading kingdom.

Criterion (iv): be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;

This criterion is justified by the State Party on the grounds that the pyramids at Meroe are outstanding examples of this highly distinctive Kushite funerary monument, and their intimate association with the well preserved remains of the urban centre is noteworthy. The evidence for iron-working is of considerable importance for studying the role of Meroe in the diffusion of metal-working technology in sub-Saharan Africa.

At Naqa, the 'Roman Kiosk', with its juxtaposition of architectural and decorative elements from Pharaonic Egypt, Greece and Rome as well as from Kush itself, and the Lion Temple, which preserves superb reliefs of the Kushite gods and royalty, are of especial importance.

Musawwarat es-Sufra is a unique architectural ensemble with temples, courtyards, and domestic buildings, as well

as major installations connected to water management, quarries and industrial areas.

For this criterion to be fully justified there needs to be consideration of including the port within the boundaries.

ICOMOS considers that this criterion has not been fully justified at this stage.

Criterion (v): be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;

This criterion is justified by the State Party on the grounds that the major centres of human activity far from the Nile at Musawwarat es-Sufra and Naqa raise questions as to their viability in what is today an arid zone devoid of permanent human settlement. They offer the possibility, through a detailed study of the palaeoclimate, flora, and fauna, of understanding the interaction of the Kushites with their desert hinterland.

ICOMOS considers that the sites on their own do not demonstrate how communities were sustained through interaction with the landscape. More extensive areas could perhaps display this evidence.

ICOMOS considers that this criterion has not been demonstrated.

ICOMOS considers that the serial approach is justified but the full extent of the serial needs further assessment.

ICOMOS considers that the nominated property has the potential to meet criteria (iii) and (iv) but recommends that further assessment is needed to assess the contribution of the port of Wad ben Naqa to the potential Outstanding Universal Value and that an extended area at Meroe is nominated.

4 Factors affecting the property

Development pressures

Urban expansion is a potential threat to the integrity of the site of Meroe. There appears no potential for this to occur at Musawwarat es-Sufra or Naqa.

ICOMOS notes that there are sufficient means to control such development as long as the Antiquities authority (NCAM), the local authorities and local communities hold regular meetings to discuss development plans. Uncontrolled development by other government departments at Musawwarat es-Sufra and Naqa has been successfully halted.

The plateau to the east of the pyramids at Meroe is rich in minerals, especially iron ore, and it is stated in the nomination dossier that it could be subject to mining in the future.

ICOMOS considers that mining so close to the property, with the need for associated infrastructure and increased traffic, could be a major threat to the property.

Tourism pressures

The number of tourists and visitors is not high, around 6,000 annually over the past two years. The three sites can be easily visited in a one day return trip from Khartoum. Several tourist companies organise trips to the region normally in the period from mid-October to the end of March. There are two small hotels in the neighbourhood of the Meroe pyramids, and a larger hotel in the town of Shendi, 60kms from the sites. A site museum is being built near the pyramid fields at Meroe and a small museum has been opened in collaboration with the University of Humboldt, Berlin, inside the Great Enclosure at Musawwarat es-Sufra. A project for a museum at Naqa is being considered in collaboration with the Archaeological Mission of the Egyptian Museum, Berlin.

There is no central ticketing office, information centre, adequate and functioning toilets, interpretative panels and brochures, trained guides or established trails.

Some damage to the property is attributed to tourists including graffiti and damage to the stonework, and litter. Many archaeological features not represented by standing walls such as the workshop areas, cemeteries, habitation sites, and the smaller *hafirs* are constantly endangered by tourist cars and other vehicles driving over the sites.

The River Nile State has no comprehensive tourist plans. The current priority for the River Nile State is infrastructure and rural development. Currently under the Transitional Constitution based on the Comprehensive Peace Agreement between the South and the North, revenue from tourism at the sites should be shared between the National Corporation of Antiquities and Museums (NCAM) and the Department of Tourism in the River Nile State.

ICOMOS notes that the impact of tourism is already visible in the form of graffiti on the sandstone structures, and considers that the State Party's approach based on education and information is insufficiently rigorous. ICOMOS recommends compulsory guiding as a solution, since the property is so large that in order to guard the sites adequately one would currently need more guards than one would need guides if they were mandatory.

Environmental pressures

Desertification and wind erosion are the main threats, especially to the pyramids of Meroe. Some parts of the Meroe town site, Musawwarat es-Sufra and Naqa

occasionally suffer from summer rains. A drainage system is needed at several monuments.

ICOMOS considers that desertification and wind erosion are the main threat to the sites. The abrasive effect of the wind has almost completely faded the reliefs of the Sun Temple at Meroe. If this level of destruction were to happen to the whole property, the Outstanding Universal Value would undoubtedly be at risk. The current approach by the State Party is to leave some pyramid chapels at Meroe covered in sand to avoid further exposure. An acacia plantation to the north-east of the Northern Cemetery at Meroe is being considered, but it is doubtful whether such a plantation would be sufficient. The complete Meroe property may need to be fenced in order to allow ecological recovery such as that which can be observed in the Royal City.

Natural disasters

A small section of the Meroe town site on the western boundary of the property is vulnerable to flood from the Nile River. It has flooded four times in the past 60 years.

ICOMOS notes that this threat is being addressed by the Antiquities authority (NCAM) in collaboration with international partners.

Impact of climate change

Increasing desertification is leading to an increasing rate of erosion by windblown sand. Indications are that the climate has become gradually drier from Neolithic times onwards. However faunal and floral evidence indicates a higher rainfall at the time of the Kushite Kingdom by comparison with today's climate in central Sudan. The present desert environment is partly the result of over-exploitation of the natural resources such as over-grazing and wood-cutting. This is demonstrated by the natural re-establishment of an acacia forest within the fenced off Royal City archaeological site at Meroe.

ICOMOS considers that the main threats to the property are mining, desertification and wind erosion.

5 Protection, conservation and management

Boundaries of the nominated property and buffer zone

Meroe

The nominated property boundary includes the ancient town, the non-royal and elite cemeteries, the Sun Temple, its associated *hafir* and the Western elite cemetery. It also includes the Northern and Southern royal cemeteries and the gallery quarry to the east. The modern village of Kigiek and the settlement of Deraqab lie outside the boundary.

The buffer zone extends from the hills to the east of the royal cemeteries to the Nile and includes areas to the

north and south of the archaeological remains which are clearly visible from them. At present, the buffer zone is cut through by modern pipelines. The latter are to be redirected in the near future to the east of the buffer zone while the telegraph pole line is no longer in use. The buffer zone also includes the unfinished rest house a little to the east of the Southern Cemetery.

ICOMOS notes that Deraqab to the north should be included in the nominated property as important archaeological remains lie within the village. According to the Management Plan (p. 190) it is included. The feature map provided by the State Party as part of its additional information of October 2010 does not show the boundaries of the property or the buffer zone.

ICOMOS also notes that the buffer zone needs to be extended to include the south flanks of the northern hills. The telegraph poles have been removed since the nomination dossier was written. The pipelines go through the nominated property as well as the buffer zone as shown on the 'plan of registered archaeological sites between the city area and the stone quarries showing pipeline' (after F.W. Hinkel in *Wildung*: 408, Fig.64).

Musawwarat es-Sufra

The nominated property boundary encloses all the structural remains directly associated with the Kushite activities at Musawwarat es-Sufra as well as the cemeteries adjacent to the site. Several of the quarries are also included. Within the boundary lies the modern compound (Sudan Civilization Institute) with its trees, well, mosque and rest house along with the dig house of the German Archaeological Mission.

The buffer zone extends far from the site enclosing most of the area visible from it, in an attempt to preserve the desert environment.

ICOMOS considers the boundaries of the nominated property and buffer zone are satisfactory but the feature map provided by the State Party as part of its additional information does not show the boundaries of the property or the buffer zone.

Naqa

All archaeological features directly associated with the site are included within the nominated property boundary.

The buffer zone seeks to enclose most of the environs of Naqa visible from the site. It is anchored on the three prominent hills, Jebel Hardan, Nasb es-Sami and Jebel Gerai, along with the promontory to the north of Naqa on the right bank of Wadi Awateib. It includes the Kushite remains at Jebel Matruga and at the foot of Jebel Hardan and Nasb es-Sami.

ICOMOS considers the boundaries of the nominated property and buffer zone are satisfactory, but the feature map provided by the State Party as part of its additional

information does not show the boundaries of the property or the buffer zone.

ICOMOS considers that the boundaries of the nominated property and of its buffer zones are adequate at Musawwarat es-Sufra and Naqa but are not adequate at Meroe.

Ownership

The three sites that make up the nominated property are owned by the National Corporation of Antiquities and Museums (NCAM) on behalf of the central government of the Republic of the Sudan. There is no mention of traditional or customary ownership but the Management Plan mentions the need to resolve the situation of some of the inhabitants affected by the delimitation of site boundaries and buffer zones.

Protection

Legal Protection

At the national level, the three sites that make up the nominated property are protected under article 13 (5) of the Interim Constitution of the Republic of Sudan of 2005.

The property is protected by the provisions of the *Antiquities Protection Ordinance* of 1999. It is also protected by Presidential Decision/Decree (no. 162 for the year 2003) for the *Confiscation of the Region of Naqa, Musawwarat and Begraweya and for the Creation and Register of a National Reserve within this Region and managing it*. It is expected that the creation of the proposed Management Committee for the Island of Meroe involving all stakeholders will greatly increase the power of the law, and in particular the physical protection of the property. All components of the property are guarded by civil guards and a police force.

ICOMOS notes that the Reserve declared here encompasses all three sites and their buffer zones. The Reserve is supposed to be overseen by a management council but its effectiveness is doubtful as although it includes both national and state officials, NCAM is not a member of it and it does not convene regularly.

Traditional Protection

According to the State Party, traditional and popular interest in the sites and their cultural heritage provides another layer of protection. In many instances this layer is organised under popular committees or cultural clubs operating from the localities surrounding the sites such as at Shendi, Kabbushiyya, Begraweya, Ba Naqa and al-Awateib.

ICOMOS notes that there are no traditional forms of protection as such in place.

Effectiveness of protection measures

ICOMOS notes that physical protection relies on the power of the formal laws and since the permanent police presence, no more cases of theft have been reported. Fines for graffiti are about USD90 for a first offence, which is high for most Sudanese. There was no evidence of looting, and no evidence of damage due to goats.

The effectiveness of development control within the nominated property and buffer zone fully depends on the local presence of NCAM, and its intervention to enforce the law before any illegal construction begins.

In conclusion, ICOMOS considers that the legal protection in place is adequate.

Conservation

Inventories, recording, research

According to the nomination dossier, archaeological research has been undertaken at Meroe since 1910, Musawwarat es-Sufra since the late 1950s and Naqa since the 1980s by various institutions, mostly foreign, and has been published in numerous journals as listed in the nomination dossier's Bibliography.

Research, recording and conservation works are currently being undertaken at the three sites by the following institutions:

Meroe town site: Ontario Royal Museum and the University of Khartoum;
Meroe 'Royal Baths': the German Archaeological Institute;
Musawwarat es-Sufra: Humboldt University, Germany;
Naqa: The Egyptian Museum of Berlin.

ICOMOS notes that there is no overall inventory of individual building remains/sites. It is not clear that copies of all the data gathered by the excavation teams are deposited in Sudan.

ICOMOS considers that an overall inventory of the elements of the sites that comprise the Outstanding Universal Value of the property should be compiled as a basis for an overall conservation and monitoring program.

Material from the excavations is held in the collections of the Sudan National Museum, as well as in foreign institutions that funded the various excavation programs, and the Department of Archaeology of the University of Khartoum. Some material is stored at the Meroe dig house and in the site museum.

Present state of conservation

The State Party states that there has to date been some restoration and reconstruction of the remains (as detailed above) using a variety of methods at all three

sites. The lack of sufficient qualified NCAM staff and no overall site director/co-ordinator is not conducive to a consistent approach. A few pyramids and funerary chapels were reconstructed by NCAM under the direction of the late Dr. F. Hinkel. The Photographic Record of Rapid Condition Assessment attached as an Annex to the Management Plan documents the present state of conservation. This is described in Section 5 of the Management Plan as a state of ongoing slow deterioration of the archaeological remains due firstly to exposure to the harsh effects of the natural environment, and secondly to erratic and in some instances ineffective regimes of maintenance which address only specific elements of the sites.

ICOMOS concurs with this view.

Active Conservation measures

Meroe

The Ontario Royal Museum and the University of Khartoum are undertaking comprehensive surface and geophysical surveys, mapping unexplored parts of the site and are studying previously excavated buildings such as the Temple of Amun including undertaking its partial reconstruction. They also propose many conservation measures for the site. ICOMOS considers that all proposals for the site should be planned in accordance with the overall conservation policy and management plan for the property.

Musawwarat es-Sufra

Since 1993 detailed photogrammetric documentation has been undertaken of the Great Enclosure and a survey of the state of preservation (with involvement of ICCROM); courtyards have been cleared of excavation spoil and a shelter belt has been planted to protect against sand and wind erosion. Sand dunes have been removed from courts and terraces to prevent damage from water runoff; dikes have been built to prevent flooding from the north-westerly hills. A parking area has been established south of the Great Enclosure.

Similarly since 1993 a detailed survey of the state of preservation of the Lion Temple and its roof has been undertaken (with involvement of ICCROM). Depressions beside the temple pylon that accumulated water and destabilised the ground beneath have been filled and a concrete floor has been laid to the north and south of the pylon in order to protect its foundations from rainwater. The shelter belt has not been successful due to lack of constant watering. The Humboldt University mission proposes a number of conservation measures for the site. ICOMOS considers that all proposals for the site should be planned in accordance with the overall conservation policy and management plan for the property.

Naqa

The archaeological mission of the Egyptian Museum, Berlin proposes excavation, conservation and consolidation of the Roman 'Kiosk' (Hathor Chapel),

temple 400 and selected buildings in the city. The aim is to create an Archaeological Park. ICOMOS considers that all proposals for the site should be planned in accordance with the overall conservation policy and management plan for the property.

Maintenance

ICOMOS notes that there is no central maintenance of the sites beyond what is done by the individual archaeological missions. A maintenance program should be included in the Management Plan.

Effectiveness of conservation measures

As reported in the Management Plan, there is currently no overall conservation approach and the sites suffer from ineffective maintenance. A Conservation Plan is proposed by the State Party as part of the Management Plan.

ICOMOS considers that an overall conservation approach and agreed conservation policy for the property is an urgent priority. Past conservation practices and protection attempts need to be reviewed and assessed for their efficacy and current international conservation philosophies and practices at archaeological sites need to be investigated in terms of their applicability to the Meroe sites. A Conservation Plan for the overall property needs to be developed, so that conservation actions will be properly co-ordinated and follow good conservation practice.

In conclusion, ICOMOS considers that a Conservation Plan with an agreed conservation policy covering the three component sites needs to be developed as part of the Management Plan for the property. All proposals for works at any of the sites should be planned in accordance with this overall conservation policy and Management Plan. On-going maintenance also needs to be structured and agreed between all the archaeological missions.

Management

Management structures and processes, including traditional management processes

Management of the three component sites is the responsibility of NCAM. NCAM has 409 employees headed by a director general and has three main departments. The Fieldwork Section is responsible for archaeological work and co-ordination of foreign missions. Personnel are graduates of national and foreign institutions, together with technical assistants and site guards. The Museums Section organises exhibitions and its personnel include curators who have undertaken intensive training courses in major international institutions. The Restoration Section is responsible for the care of moveable objects in museums/stores and for immovable antiquities. Personnel are graduates in relevant fields and some have participated in ICCROM training courses. Technical

staff has acquired considerable expertise in the dismantling and re-erection of monuments. As well as public relations, library and photographic sections, there is a technical workshop staffed by trained masons, carpenters etc.

At present, responsibility for the three component sites resides with the Antiquities Inspector resident at Shendi, 40km from Meroe and c60km from Musawwarat es-Sufra and Naqa, assisted by four technical staff and over 20 permanent and temporary recruited guards. There is a significant police force on each site. A World Heritage Management Committee is proposed to oversee management of the whole property, and the Chairman of this Committee has already been appointed. An Executive World Heritage Site Management Team is proposed under the Management Plan, with an overall Site Director for the whole property, Conservation Co-ordinator for the whole property, a Site Manager for each of the three component sites, two assistant managers and two technical assistants for each site, a ticket office operator and 10 guards for each site. It is not explained how this additional staff will be funded. Currently funds are provided by the central government and the archaeological missions; however international financial and technical assistance is needed for major projects. This was confirmed in the additional information provided by the State Party in October 2010, which also contained information regarding a proposed collaboration between NCAM and the *Istituto Superiore per le Tecniche di Conservazione dei Beni Culturali e dell'Ambiente "Antonio De Stefano"* (ISAD). This may address funding and training issues. Euro 1,500,000 has been pledged by the Italian government towards the preservation of Nubian heritage.

ICOMOS considers that the proposed Management Committee, of which the Chairman has already been appointed and which will oversee co-ordinated management of all component sites would satisfy paragraph 114 of the *Operational Guidelines*. The proposed Executive World Heritage Site Management Team should go a long way in redressing current management shortfalls. However the composition of the Team may need fine-tuning in that Meroe may require more staff than the other smaller sites, and a single ticket office operator seems insufficient.

Policy framework: management plans and arrangements, including visitor management and presentation

A draft Management Plan was developed for the property in January 2009 by NCAM. It addresses the characteristics and intricacies of the three component sites and follows the approach appropriate to World Heritage properties. It includes an Inventory of Conservation Problems to be addressed which will assist in quantifying the intervention and resources required for undertaking conservation on the sites in future.

The proposed Executive World Heritage Site Management Team will be responsible for implementing the activities of the Management Plan, guided by the World Heritage and other international conventions, and overseen by the World Heritage Management Committee.

ICOMOS notes that the Management Plan is yet to be implemented. It awaits funding and staff.

Risk preparedness

A risk management strategy is included in the Management Plan. The main risks are due to river flooding of the Royal City at Meroe, rainstorm flooding and damage at Naqa and sandstorm damage at Musawwarat es-Sufra. At Meroe flood risk is being managed by the construction of water diversion systems with awareness of the sensitivity of above and below-ground archaeological remains. At Naqa storm water diversion and evacuation are being re-evaluated and improved around the Amun Temple, the Lion Temple and the Roman 'Kiosk' site. At Musawwarat es-Sufra the reconstruction of enclosure walls and other internal walls is the approach taken to providing protection from sandstorms.

ICOMOS considers that the risk preparedness strategy should also cover visitor/tourist security in the case of emergencies.

Involvement of the local communities

According to the nomination dossier a stakeholder consultation process was used in the development of the Management Plan, including local and national authorities. It is not clear to what extent this involved local communities as such.

ICOMOS notes that only in Meroe is there a local community. Local families have been employed by NCAM to serve as guards; the positions are inherited from father to son, promoting a certain degree of family pride and commitment towards the sites.

According to the Management Plan, an Advisory Committee will be set up, headed by NCAM and consisting of representatives of the main stakeholders with influence over the site. The Committee will oversee the implementation of the Management Plan and the proper spending of funds coming from donors. The Committee will meet quarterly with the Executive World Heritage Site Management Team.

ICOMOS notes that currently there is no form of interpretation or presentation at either Meroe or Naqa. At Musawwarat es-Sufra there is a small museum. Without a guide the visitor would find it difficult to understand the sites.

Resources, including staffing levels, expertise and training

According to the nomination dossier there is a great need to develop the status of NCAM and the importance of its work in managing the cultural resources of the country. Low salary levels restrict the agency's ability to recruit and retain qualified personnel. The proposed Advisory Committee will need to find sources of financial support for positions needed for the protection, management and promotion of the serial nomination. The development of cultural tourism is seen as a driver for this, however improved visitor facilities will need to be provided.

ICOMOS notes that NCAM is currently forced to depend on the archaeologists of Shendi University for practical assistance. The University has pledged to assist with training and research. However provided funding is found for the new positions, there should be enough archaeology graduates within the Sudan to fill them.

Effectiveness of current management

ICOMOS considers that there is a great need for a co-ordinated approach to the management of the sites.

In conclusion, ICOMOS considers that completion of the establishment of the Management Committee for the overall property is a high priority, together with funding and implementation of the Management Plan. It should be extended to include a maintenance program for the sites, linked to the monitoring system.

6 Monitoring

Key indicators for measuring the state of conservation are set out in the Management Plan. These cover the implementation of the policies and related action plans. Currently there is no central monitoring system in place.

ICOMOS considers that the monitoring system needs to be linked to an overall inventory of site features which are attributes carrying the Outstanding Universal Value of the sites.

In conclusion, ICOMOS considers that the monitoring system needs to be further developed.

7 Conclusions

The three sites of Meroe, Naqa and Musawwarat es-Sufra together present an extraordinarily vivid testimony to the distinctive Meroitic culture that flourished for over a millennium from the 8th century BC to around the 4th century AD around the River Nile. The Royal tombs with their pyramidal shape express exuberantly its fascination with the Egyptian culture of the Pharaohs and the elaborate temples demonstrate strong links with the Classical world as well as the underlying culture of

sub-Saharan Africa. The Royal city of Meroe was the heart of this kingdom. The other two sites were strategically placed religious sites in the semi-desert and with their *hafir* provided a focus for the semi-nomadic tribes. What underpinned the prosperity of this kingdom was the extensive trade in luxury goods that supplied cities of the Mediterranean and Arabia, and societies as far afield as Lake Chad in West Africa. What has not been nominated is the port of Wad ben Naqa on the River Nile which was strategically important in facilitating this trade. Further analysis is needed to understand its relationship with the other three sites.

The three nominated sites have been the subject of excavations over many decades and varying approaches to conservation and repair. Currently there is no overall inventory of the sites and not all the material associated with the excavations is within the country. There is an urgent need to collect all the relevant material as the basis for the development of an overall database. This could then support the drafting of a Conservation Plan that sets out an agreed approach to future conservation in line with accepted conservation principles and would underpin adequate monitoring.

The three sites are spread out and large, and managing them and the visitors that visit them presents considerable challenges. There is an urgent need to put in place the Advisory Committee as an over-arching management body that can oversee the implementation of the Management Plan. To achieve this will require extra resources over and above what is currently available.

The three sites are fragile and vulnerable and adequate resources to allow a satisfactory degree of control of management, conservation, excavation and visiting is essential if they are to be properly sustained.

Recommendations with respect to inscription

ICOMOS recommends that the examination of the nomination of the Archaeological Sites of the Island of Meroe, Republic of Sudan, to the World Heritage List be **deferred** in order to allow the State Party to:

- Augment the comparative analysis to consider how the three sites relate to other remains from the Kushite kingdom and particularly to the port of Wad ben Naqa as a preliminary to considering extending the site to include this port;
- Extend the Meroe property boundary to include the archaeological remains of the northern part of the Royal City;
- Extend the buffer zone for Meroe to include the southern flanks of the northern hills;
- Complete the establishment of the Management Committee, obtain dedicated funding and implement the Management Plan to include a maintenance program for the sites, linked to the monitoring

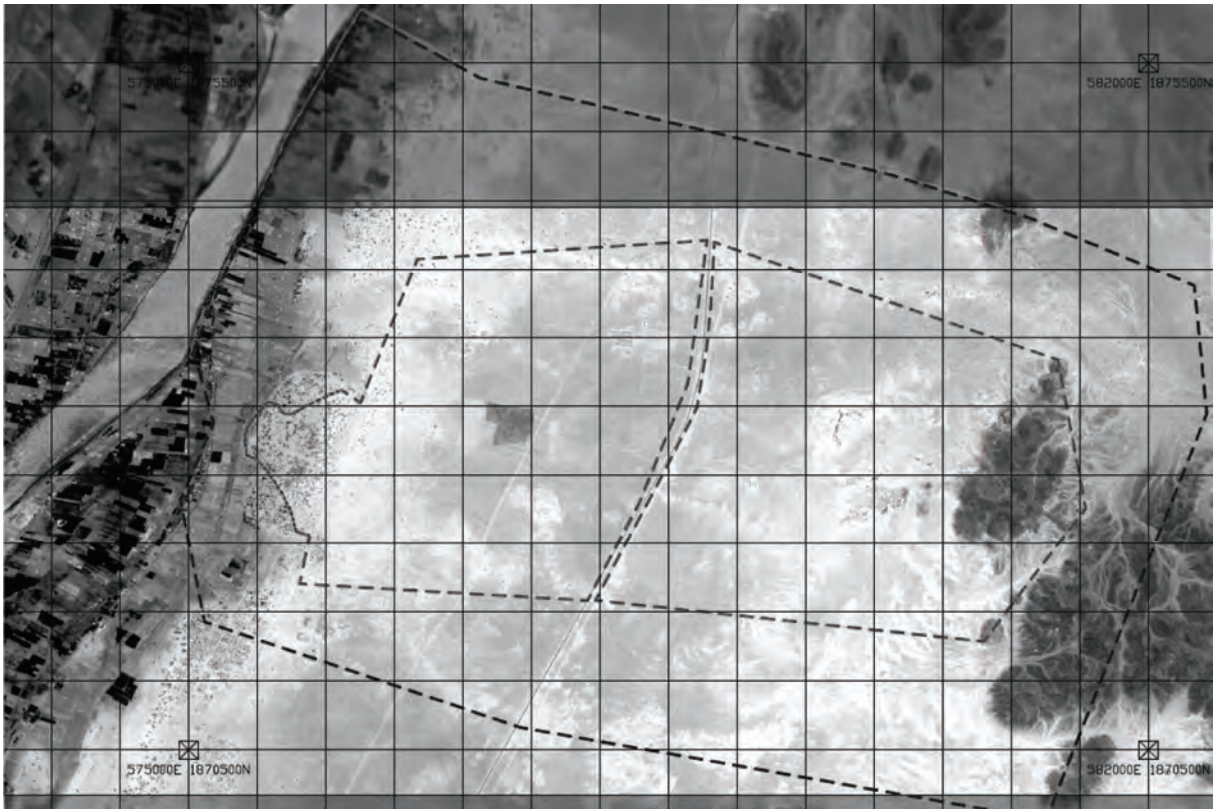
system; and establish mandatory guides for visitors/tourists;

- Develop an overall inventory and database for the sites as a basis for the conservation program and monitoring;
- Develop a co-ordinated Conservation Plan with an agreed conservation policy for the three nominated sites;
- Strengthen protection of the setting of Meroe to ensure that mining in the setting is not allowed where it would impact adversely on the property;
- Provide a timetable for rerouting the highway, power transmission lines and pipelines around the outside of the Meroe site.

ICOMOS considers that any revised nomination would need to be considered by an expert mission to the site.

ICOMOS also recommends that the State Party be encouraged to seek international assistance for the protection and conservation of the property, through the development of the co-ordinated Conservation Plan, in accordance with paragraph 235 (c) and paragraph 241 (Conservation and Management Assistance) of the *Operational Guidelines for the Implementation of the World Heritage Convention*.

ICOMOS finally suggests that the international community should be invited to consider support for these extraordinary sites and might offer cooperation to help with the development of the co-ordinated data-base and the Conservation Plan.



Aerial photograph showing the boundaries of the nominated property



Meroe, the enclosure wall on the east side of the Royal City



Meroe, North Cemetery facing west



Musawwarat es-Sufra, Aerial view of Temple 100



Naqa, the settlement